

the journal of
college radio

Vol. 18, No. 5

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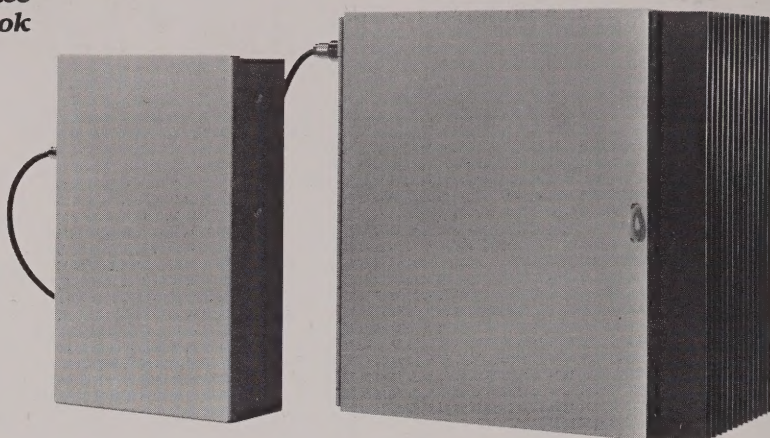
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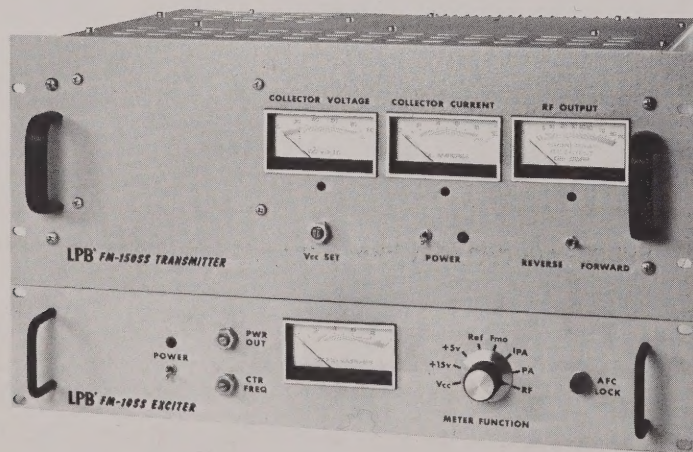
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IBS

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IBS

March/April, 1981
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JEFF TELLIS

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in this issue:

From the Editor	2
FM Proof of Performance	3
Across the Spectrum: AM Stereo	4
IBS High School Station Services to Grow	5
A Holistic Approach to Radio News	6
Targeting Your Format to Your Audience	7
How to Conduct a Survey	8
Cable Radio: A Very Viable Alternative	10

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from the editor

Somehow, the end of each academic year seems to bring with it an almost frenzied pace of activity for those in college radio. There's the IBS National Convention, (which was very successful this year in Washington), and, of course, the usual turmoil of mids, Spring vacation, term projects, papers, and exams, and the election of new officers/department heads at the station. In the midst of this, plans must be made for the Summer and Fall as more stations stay on-the-air on a year 'round basis.

It also seems to be a time when new rules, policies, and proposals come up for discussion at the FCC, in Congress, and elsewhere that may affect our stations. Meanwhile, we're often so pre-occupied with everything else that we don't pay enough attention to them.

This year, the FCC gave 10-watt stations some important help in the form of the elimination of the deadline for filing power increase applications. (You'll find a complete discussion of this decision in the Jan./Feb. issue of JCR). What you may not have been aware of was that on March 5th, National Public Radio petitioned the FCC to reconsider this action and reimpose the deadline. IBS filed an opposition to the NPR petition as did other parties. Copies were mailed to all IBS member-stations, but if you didn't get one or would like an extra copy, just drop us a note.

With all the talk about federal budget-cutting in the area of "public" broadcasting, NPR and their affiliated stations may be in for some rough times. In fact, some have proposed cutting the CPB and NPR budgets entirely within a few years.

Because of the excellence of some of their programming, we would **not** be happy to see this happen, in spite of our differences with them. Of

course, it is difficult to sympathize with them completely when they have systematically excluded our stations from the financial and programming support given to others. Much as we enjoy some of their programming, it is unfortunate that they look to expand their own stations at the expense of those which outnumber and pre-date them: namely, ours.

We'd like to see federal funding maintained, though perhaps distributed on a more equitable basis, giving our stations a rightful piece of the pie.

Ironically, because we've been excluded from such aid, our stations long ago learned to be self-sufficient. Couple this with the upcoming power increases and, as a whole, our stations could well emerge stronger than ever.

This whole push towards "de-regulation" has got a lot of our station people confused, particularly because most newspaper accounts of the recent FCC action did not differentiate between commercial radio stations and noncommercial educational radio stations. So far, all of the de-regulation measures which have just gone into effect apply only to **commercial** radio stations. The FCC has lightened their ascertainment requirements, making them similar to ours. There are no more limits on commercial time per hour, no minimum amounts of news and public affairs that must be broadcast, and they are no longer required to keep program logs, although most probably will, if only to satisfy advertisers.

But, none of this applies to non-commercial educational FM stations. IBS may, within the near future, move for at least some of these relaxed provisions to be made applicable to our stations, particularly the nit-

picking rules about keeping program logs. Our feeling is that stations should keep logs, but that they shouldn't have to meet all of the detailed and burdensome rules regarding log format, completion and correction procedures including cross-outs, initialing, dating, etc. What do you think, and what would you like to see IBS include in our petition? Let us know. Soon. But, as of right now, keep those logs going, and if you've got 100-watts ERP or more, keep on doing that ascertainment.

Presently, there's also much discussion going on in the House and Senate about a number of bills affecting broadcasting. If anything happens on these over the Summer, we'll let IBS member-stations know about it by mail and summarize any actions in the September issue of JCR.

In this issue, you'll find a variety of articles on different topics, with several coming from people at stations just like yours. While you have some time, over the Summer, you may want to try your hand at writing on a topic that might be of interest to other school and college radio stations. We're always looking for new authors and having an article published always looks good on a resume.

If you're graduating, but would still like to keep in touch with school and college radio, remember that individual subscriptions to the **Journal of College Radio** are available. Write our offices and we'll send you details.

The IBS/JCR offices will be open throughout most of the Summer, and you can reach us by mail or phone if a question or problem comes up. JT

FM proof of performance - part II: stereo proof

by Charles A. Hecht

Last month we covered the FM Proof of Performance including background material, legal and technical requirements and a detailed look at the mono proof. This time we will begin by focusing on the stereo proof and then a proof troubleshooting guide will follow.

Initially, it is important to realize that the stereo proof is not two combined mono proofs. Therefore, all measurements **must** be performed with all audio and transmitting equipment operating in the stereo mode. But there is some good news. Several similarities exist between the mono and stereo proofs. When compared to the mono proof, the stereo version does not require any additional test equipment, changes in legal requirements, or more stringent technical standards. Other than operation in the stereo mode, the differences lie in the making of additional tests and measurements associated with stereo operation. These extra tests include: stereo separation, crosstalk, 38Khz suppression, pilot injection and frequency deviation. Strangely, none of these tests are specifically required by Section 73.254 of the FCC's rules for equipment performance measurements. However, all stations are required to meet these standards under Section 73.222, "Stereophonic transmission standards." Although the wording is nebulous, it is strongly recommended that these additional tests be conducted.

When defining the equipment necessary for the proof last month, we mentioned the oscilloscope as a useful addition. Connect the scope to the output sample terminal of the stereo generator at the exciter and check for a flat baseline. Remember, as in dealing with any circuit in a high RF environment, you should minimize lead lengths. Check for a straight baseline. If the baseline is not straight, consult the manufacturer's service manual for proper adjustment. Stereo separation should exceed 30 db at full modulation at frequencies of 50, 100, 400, 1000, 5000, 10,000, and 15,000 Hz. When performing any test

involving modulation levels, do not forget to take the pre-emphasis curve into consideration and to include the 10% modulation contribution of the stereo pilot.

Crosstalk measurements are more complicated and it is tougher to meet requirements. In order to measure crosstalk, a L-R difference signal must be fed into the console. Optimization of this test can be achieved by balancing the console's master gain controls for minimum crosstalk at 400 Hz. This procedure can only be done at this frequency. An important factor in good crosstalk performance is tight channel balance in all parts of the system. Do not forget to check Telco loops in this regard.

The 38 Khz subcarrier must be attenuated by at least -40db, while the 19 Khz pilot subcarrier should be maintained within +2 Hz while modulating the main carrier between 8-10%. Problems here can be resolved by referring to the manufacturer's service manual for correct adjustment. The 10 Khz pilot is what triggers the stereo indicator on an FM receiver. Low pilot levels will render a receiver

incapable of switching to stereo.

Finally, since the modulation monitor is such an important part of the tests, it is imperative that full confidence can be placed in its ability to pass these tests by itself. Often an out of calibration mod monitor indicates a bad proof, when in reality, the station is in good shape. For stations with separate studio and transmitter sites, relocation of the mod monitor at the transmitter will optimize results, especially FM noise.

So what can be done if your station does not pass the proof? Well, before you consider a career in a Chinese laundry or donate your transmitter to the Salvation Army, consider these alternatives: Remember that you are dealing with a chain of equipment and no chain is stronger than its weakest link. Try testing each piece of equipment individually in the deficient area until the offender is located. Sometimes the problem is not localized and several units contribute to the problem, as in frequency response errors. The following chart lists some of the most common problems and causes:

PROBLEMS	CAUSES
Low frequency response	isolation and matching transformers, equipment interface z, tubes, telco loops
High frequency response	isolation and matching transformers, RF bypass circuits, tubes, telco loops
Distortion	amplifier bias, high noise levels, tubes, RFI
Noise	power supply (hum), bias adjustments, transmitter blower, equipment interface (levels), test leads, RFI, telco loops
Crosstalk	channel balance, phasing errors (check telco loops first), mod monitor
Separation	Stereo generator alignment (poor baseline on scope), test leads, mod monitor

A well maintained station and an organized troubleshooting approach are the keys to a good proof and

successful class A operation. Let logic prevail and the results will be rewarding.

across the spectrum: AM stereo - when? FM quad - why?

by Jeff Close

AM broadcasters want stereo to help recover audiences that have discovered FM, and in return, FM broadcasters want to further increase their market position with quadrasonic sound. The Federal Communications Commission has been considering both for the past few years, and may now be on the verge of decisions in both areas.

Since 1978, FM radio stations have been taking over in the listenership war with AM. The superior quality of the FM audio is something that most people became familiar with in the mid-sixties. With the passing of another decade, FM radios have invaded the portable market, many cars now come with FM available, and needless to say that FM has all but completely replaced AM for the home hi-fi enthusiast.

This penetration of FM receivers and listenership has spurred anew the old question of AM stereo. Technologically, AM stereo had been worked out 20 years ago. Articles had been published at that time by both RCA and L.R. Kahn. In theory, AM radio could have been developed for stereo at a much earlier date, had there been a demand. In the case of FM, for instance, both the theory of stereo and actual multichannel transmissions (on the same carrier) occurred before World War II.

However, stereo, and high-fidelity for that matter, had to wait for improvements in record players, e.g., the "long-playing" 33 1/3rd rpm record developed by CBS, and the invention of the tape recorder by the Germans during WWII. As the idea of stereo

caught on, the technology was further developed in FM for a second audio channel of 15 kHz bandwidth. The FCC approved FM stereo in 1961. It is likely that RCA and L.R. Kahn thought that AM broadcasters would want to fight back with AM stereo right away, but AM radio so dominated the airwaves that there was then little interest in AM stereo. But, the demand is now in place and the FCC is pondering the question of which system of AM stereo to approve.

For the past several years, AM broadcasters have been upgrading their equipment to prepare for the advent of AM stereo which the FCC had promised for the Spring of 1979. In fact, last Spring, about a month after the IBS Convention, the FCC came to a "tentative" decision. They had decided that the Magnavox system was better than Belar, Harris, Motorola, or the Kahn/Hazeltine systems. In coming to this decision, the Commission ignored the recommendation of its Broadcast Bureau that all five systems should be approved. The Commission had never tried approving multiple technologies for broadcasting that are not compatible. This type of solution would have let the consumer make the final choice, but it ran the risk that some people would end up with equipment for system A, while the marketplace decided on system B. The alternative would have been to require receiver manufacturers to make a set that would receive all five systems, but it would cost the consumer more than any receiver that could decode only one of the five systems.

The FCC decided that multiple systems would be either too confusing or too expensive and that one system had to be chosen. Commissioner Quello suggested the Magnavox system, pointing out work done by the Office of the Chief Scientist (formerly the Office of the Chief Engineer) which seemed to rate

the Magnavox system as best. This rating system has been the source of great misgiving and controversy. The system was immediately challenged by the Office of Plans and Policies (OPP). OPP pointed out that if you weighted certain items with a different, but perhaps equally valid point-system, you would find a different winner. OPP urged the Commissioners to use a lottery, since all five systems met the Commission's basic technical standards. Had OPP's advice been taken, we might be listening to AM stereo today, but the advice was declined. To add to this already confused issue, it was also brought out that the Belar system scored almost the same as the Magnavox system, and that Magnavox was not a clear winner, even by the point system that had been used.

The confusion began to unnerve the Chief Counsel's Office, and they were worried that a court challenge to the choice of the Magnavox system could bring a reversal of the decision, if the technical basis for the decision were not strong. In the following months, the technical staff of the FCC did pay attention to this warning. The point system was revised and all five systems were studied anew. The result of the new study was the new tentative choice of the Motorola system. To be on the safe side, the Commission has aired their point system to the public and to the five system proponents so everyone will have a chance to comment before a final decision is reached. These comments were due with the Commission as this issue went to press. It will be difficult for the Commission to make a decision before the next NAB Convention this Spring, but if a decision is reached before Summer, we might see AM stereo in 1982.

For the more technically minded, the Kahn system is one of independent sidebands, one channel on

(Continued on Page 11)

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IBS high school station services to grow

By Laura Snyder
Public Relations Director/WKWZ-FM
Syosset High School
Syosset, New York

Editor's Note:

Chances are, if you're in college radio, your first real experience started as a college Freshman who had probably never even seen the inside of a radio station before then. That may be changing.

Within the past several years, there has been a quiet but rapid growth in the number of student-staffed radio stations based at high schools, preparatory schools, and other so-called "secondary" institutions.

These stations share many common problems with college-based stations, but with certain differences considering the age of their students, the

structure within which they find themselves, the school district administration, and the amount and source[s] of funding. They do provide much of the same kind of alternative programming, community service, and hands-on experience found in college radio . . . sometimes more.

Students moving into college radio from a high school station will likely have a good deal of radio experience and ability, ready to go to work with a minimal amount of training and orientation. It would seem obvious that college radio should want to help high school stations grow and develop.

Many high school stations have already become IBS members and we've given a growing recognition to their special needs. But, more remains to be done. Towards that end, Laura Snyder, Public Relations Director for a very active high school station, [WKWZ-FM, Syosset, NY], is working with IBS to help design and improve our services in this area, starting with the sessions at the recent IBS National Convention. In the future, we hope to develop a High School Station Advisory Council along with other means of identifying high school stations needs and serving them.

Having just returned from my first IBS National Convention, I am both impressed with and excited by the opportunities given stations to meet and discuss the problems and potential of High School Radio. At previous conventions, H.S. stations, limited to just one all-purpose seminar, did not have much of a chance to meet with each other. This year's convention featured four different seminars geared specifically towards high school radio.

You may ask, "What made this year different from the others — why were more seminars included?" The answer is, quite simply, that more high school stations had expressed an interest in developing methods to improve high school radio. The results from a nation-wide survey I conducted in the

fall demonstrated that high school stations realize their great potential for sharing knowledge with each other and also proved that stations are ready to begin this collaboration.

The survey results were conveyed to Jeff Tellis who agreed that IBS could offer more to high school stations. The first step was the additional seminars at the IBS National Convention. The turnout for these sessions were relatively large and the response was extremely positive.

On Friday night, the "High School Broadcaster's Workshop" was held. John Lopiccolo, Publisher of the National High School Broadcaster's Newsletter, Louis Freedberg, Director of Youth News, John Wiesemes, Director of WLTL-FM, Ron Matusof, Chief Engineer at the University of

Pittsburgh's WPGH and I spoke on topics that ranged from common problems of high school radio all over the country to the future of forming a national association of high school radio stations within IBS.

Three more seminars took place on Saturday morning. The first was "Management of High School Stations," with John Wiesemes and Ron Matusof. At this session we discussed methods of choosing student leadership, the role of faculty advisors as well as distribution of budgets. Next were "High School Broadcasting News Workshop" and "Promotion and 'the Image' of High School Stations." The News Workshop was led by Louis Freedberg and two Youth News correspondents.

(Continued on Page 12)

a holistic approach to radio news

By Ernie Basener
Program Director/KSM-FM
Palomar College

Les Nessman, WKRP's fictional News Director, sits inside the imaginary walls of his office and contemplates his "Silver Sow" award. His hog reports have won him an award. He's happy; Management is happy; but what about the listeners? Do they need to know about hog futures, or want to know, or even care? Obviously hog reports on an urban top 40 station are an irrelevant waste of time, but don't many of us have our own versions of hog reports? Don't we all dream, occasionally at least, of being Walter Cronkite or Paul Harvey, sitting in a spacious office and pontificating about the world situation to adoring millions? The reality of today's radio demands that we speak to and for our audience, on their terms, in their language, and on their ideas of what is and isn't relevant.

Many news departments seem to operate in a vacuum. Their view of the world seems to be shaped simply by what UPI or AP or the network feeds them. More importantly, this view is passed on to the listener as the truth, the whole truth, and nothing but the truth. This pseudo journalistic detachment from the mainstream of the audience's consciousness serves to reinforce the irrelevance of its news, rather than to enhance the news department's image as "fair" and "unbiased."

What is called for is A Holistic Approach to News. Dumping a "rip and read" newscast or a network feed at a point that will do the least damage to the ratings shows an underlying

contempt for the listener. It says that he or she is some sort of music junkie, listening only for "Bread and Circuses," and that anything substantive is obviously too much for their little minds. No one likes to be insulted.

This isn't the case, however, in any format. The listeners' tastes may vary; their needs may differ from format to format, and station to station within the market. The key to a successful news department lies in finding out what is and is not important to our audiences, and integrating that which is important with the music format that attracted the audience in the first place. This merging of information segments with music, announcements, and public affairs yields a continuity of sound which gives the station an identifiable personality, one that is compatible with the lifestyle of its audience.

Finding out what is relevant to our audience is a job in itself. Fortunately, most of the work is already done for us; all we need do is use it. Demographics is the heart and soul of the business of radio, and each year hundreds of millions of dollars are spent in finding out who our audiences are, and what they eat, drink, wear, think, want, feel, hope, and dream. This information paints a fairly accurate picture of the listenership, and what they think is important. As is the case with programming, the key to a relevant news operation is the proper interpretation of this mountain of statistics.

Ascertainment surveys give us another tool to help understand our audiences. Noncommercial FM stations of 100 watts ERP or more are required by the FCC to find out what specific problems exist in our area and to run programming dealing with those problems. But, asking community leaders what problems exist too often gives us the same tired political hacks echoing their campaign platforms ad nauseam. Even sampling the entire population of the listening area will give you nothing more than an accurate picture of what's wrong with society in your area. To make an audience survey work for us, we must survey our own listeners. Here again

the P.D. can help. What kinds of promotions does the station run? Free or reduced rate concerts? Activities at a local beach or park? Great — there are your listeners. Go out and ask them what is significant. Do you run a public affairs phone-in show? Couldn't the person taking calls ask the callers a few questions while they're waiting to talk to your guest?

So now you have a good picture of the audience and what it wants. The next step is to give it to them. The transition from music programming to news is crucial to both sides. After all, what good does all your research, writing and pavement-pounding do if your audience changes to another station while you present the news. All the work that went into winning that "Golden Mike" or "Silver Sow" becomes an exercise in futility if nobody hears it. Another trip to the P.D.'s office is in order. Can you use a topical song as a transition to the news? Say your lead story deals with the E.R.A. How about playing Pat Benetar's "No You Don't" on an AOR station, or Gary Puckett's "Woman" on an oldies format? It is a much smoother transition than teletype sound effects and a deep masculine voice intoning "And now . . . the **NEWS.**" This idea, while good, can also be overdone, or get overly cute if not used sparingly. And while it won't work for every format or every story, a creative segue goes a long way when it comes to audience loyalty.

You've got the audience now, they're listening to you, and what happens next is up to you. After all the work you've put into getting to this point, do you want to bore the listeners with rip-and-read news? Let's face it, wire copy gives you the facts, the raw material of the story, but you've got to shape it so that it's interesting to the listeners. If we have a responsibility to keep our listeners informed, we have a responsibility to do so in a manner they will accept. If your audience is composed of a lot of blue collar workers from local factories, they may well want to know what's happening to the trade balance between the United States and Japan: Many of their jobs may depend on it.

(Continued on Page 13)

errata

The last issue of JCR carried a brief article about the 1980 IBS West Coast Convention. Unfortunately, authorship was attributed incorrectly. The article was written by Yvette Bozzini of KUSF at the University of San Francisco, host station for the event.

targeting your format to your audience

by Bruce Goldsen
General Manager, WXCJ
Western Connecticut State College
Danbury, CT

The debate rages on. How should college radio provide an "alternative?" Shouldn't it offer its listeners something that other stations in the area do not?

Common sense, right? However, the arguments often go much farther than that. Media mavens tell us to play "progressive" music (whatever that means). Top-40 freaks push for playlists and jingles. Some energetic souls even try to program a steady diet of public affairs and dramatic readings to "satisfy the cultural needs" of the region.

Soon, I will graduate and enter the world of "commercial" radio. I have managed a college radio station for two years, and spent many a day and night arguing the merits of our format with both a communications crusader and a music major, each of who has their own plans for the direction of the campus radio station.

It seems that everyone has the answer. If I have learned anything the past four years, it is that there is no **one** answer. There is only a carefully planned framework, and a thorough understanding of what you're doing with your radio station.

All too often, I hear excited programmers talking about their stations at college conventions. There, they describe to each other their formula for success: play plenty of jazz or folk, don't play Led Zeppelin, run a lot of news, drop all the news.

The logic is wrong. We decide that our audience should be hearing, and play it for them. Rather, it is more realistic to figure out who our audience will be, and then go about finding what that type of audience likes.

Assuming that one's station is going to play music, it becomes a matter of deciding to whose musical

tastes we are going to appeal. There is no way we can please the entire student population or surrounding community. Instead, it makes more sense to select a large chunk of the audience and program to it.

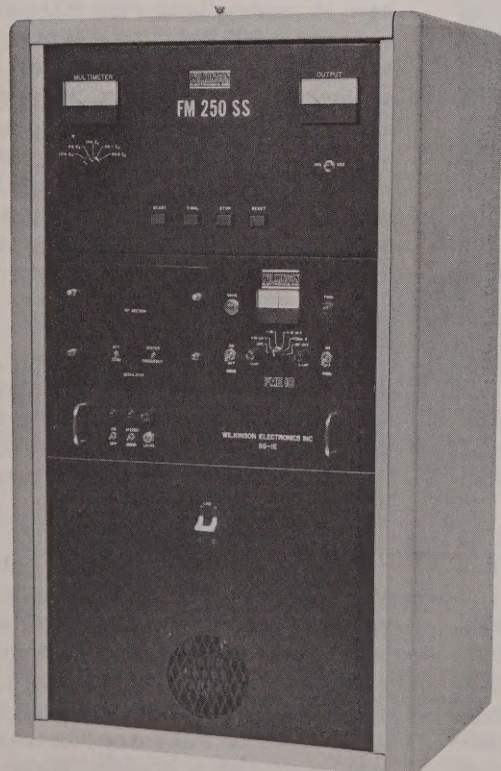
A carrier-current station is limited to the student enrollment on-campus. Yet, this limitation is a hidden asset, because the station can diversify its programming, and still monitor the reaction of the audience. This is something the broadcast station cannot do, because its signal can be picked up by anyone. The greater the signal, the more difficult it becomes to judge the effect of what is being programmed.

The programmers of the broadcast station must evaluate the market they are in. At my station, we are sixty miles from the number one radio market in the country, and fifty miles

(Continued on Page 14)

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how to conduct a survey

By Duane Lefevre
General Manager/WJMF
Bryant College

Every station should survey its audience and the people in its listening area at least once per year. Surveying these groups can give you important feedback on how many listen, who they are, what programs they like or dislike, and why.

Since you probably can't afford to hire a research company, we are going to give you a step-by-step explanation of how to go about surveying and also give you some tips on what often works best and what troubles to avoid.

What Information Do You Want

The first thing to do is decide exactly what information you hope to get from the survey. Do you want to know how many people listen to your station, how many programs they know about, what they think of your disc jockeys, your news specials or your classical music programming? It is important that you think this step out because if you leave something out here, you won't get any information about it from the survey.

The Rough Draft

The second step is coming up with a rough draft of your questionnaire including question subjects, content, and format. Start your questionnaire with some general informational questions such as age, sex, grade and so forth. This will allow you to break down your results by sex, grade, etc. For example, you may find out that you aren't reaching Freshmen or the female population as much as you would like.

Keep in mind that people are lazy. They are willing to be honest and help you as long as it doesn't require too much effort on their part. Avoid open ended questions like "Why do you dislike WAAA?" People are less likely to answer questions like that one. Open-ended questions are also very difficult to quantify and summarize.

Things aren't always black or white and your questions should reflect this. People may not hate your morning news but they may not love it either.

Word questions so they ask people to rate your morning news on a scale of one to five (one being best). Include possible answers for those who haven't heard your morning news. It is better to have someone check "don't listen" than to arbitrarily choose a rating of five and throw off your survey results.

Avoid "leading" questions or questions that hint at a "correct" answer. Such a question might be "Which of these stations do you listen to most: WAAA, WBBB or us?" Respondents are often times eager to please and if they are tipped off as to which answer you want, they will give it. This doesn't help either you or your survey.

Avoid vague questions. Make sure that the people you are surveying will understand your questions. A question asking respondents to "Rate WAAA's disc jockeys on a scale of one to five" will be less useful than a series of more specific questions such as "Rate WAAA's disc jockeys on their knowledge of music," "Rate WAAA's disc jockeys on their technical ability" and "Rate how well WAAA's disc jockeys talk on the air."

The Final Version

The third step is to rewrite and order your questionnaire. Get a group of people together for this. The more people in on it (within reason) the more points of view you'll have and the more errors you'll find. Be on the lookout for questions that 'lead' your respondent, that are vague or difficult to understand, questions without all the appropriate answer choices and questions that aren't really useful or necessary. Use care in wording your questions; avoid words like 'cheap' because they have negative connotations.

An optional step at this point is testing the questionnaire. This is a good idea because often times you take things for granted or word questions so they are hard to tabulate. To test your questionnaire, have 15 to 30 copies prepared. Distribute them to people who would be likely to participate in the actual survey. After these test versions have been filled

out, compile the results. If a number of respondents had difficulty with a particular question, you should probably rephrase it or eliminate it from the questionnaire.

How Many Surveys

The fourth step is determining how many people to survey. This is a tough question that depends on a lot of factors such as time, manpower and money available. We will avoid complex formulas and opt for common sense and compromise. Never survey less than 30 people or 1% of the total population. The total population is that group whose views you want to collect. You can survey the entire group (all faculty members or the freshman class for example) or part of the group (such as 500 people within your listening area or 300 people on campus). Generally a good rule to follow is to survey between five and ten percent of the total population.

Some things you should keep in mind in determining the number to be surveyed are how easily can you reach the people and how much money you have to spend. If reaching 500 out of a group of 2,000 won't be difficult, then survey 500. The accuracy of your survey will only improve. If reaching 5% of your population isn't possible, cut it down a bit. If you are mailing your questionnaires, try to do at least 200 — that will qualify you for the bulk mailing rate and save you some money.

Printing the Questionnaires

The fifth step is to prepare and print the final version of the questionnaire. Keep the final copy neat. The more professional your questionnaire looks, the more seriously people will take it.

Surveying the People

Now comes the key step — actually surveying the people. If you are only surveying part of the total population, be careful who you choose. If you are surveying 100 out of a group of 1,000, get a list of all 1,000 and pick every tenth name so every one has an equal chance of being chosen. Never just

(Continued on Page 12)

Never Play Naked Records on the Air!

Your records need protection. From minor scratches, dust, dirt, and just too much handling, no matter what your program format.

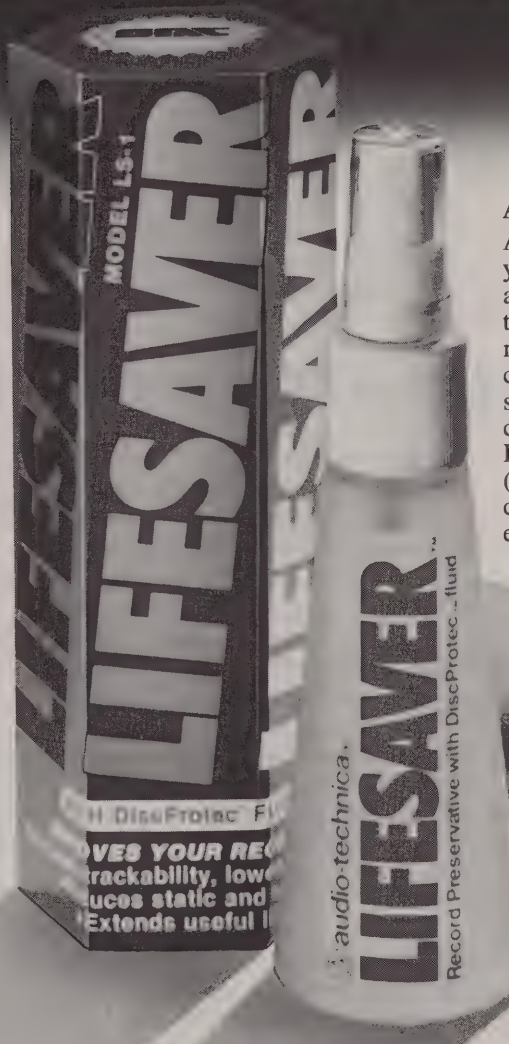
Introducing Lifesaver with Disc-ProTec™ Formula. A one-step record preservative, anti-stat, and dry lubricant. One treatment lasts 50 plays or more (Len Feldman* proved Lifesaver lasts 100 plays, but we'll be conservative).

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Save Records, Save Money

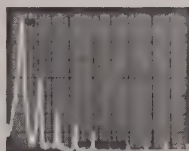
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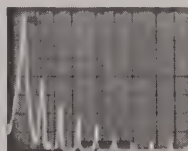
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To encourage you to prove the effectiveness of Lifesaver treatment, we'll send you a full-sized \$12.95 bottle to treat 60 sides for just \$5.00. Just send this ad (or a copy) and your letterhead. Just one sample to a station, please. And we'll tell you where you can get low-cost refills, plus see and hear other fine Audio-Technica products, including the latest microphones, headphones, other record care products, and the best cartridges and tone arms in the business! Send today.

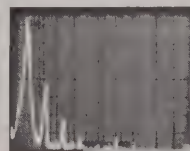
*Here's an excerpt from the Len Feldman report in Audio Magazine. We'll send you the full story with your order.



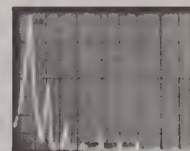
Harmonic distortion of an untreated disc during first playing.



Harmonic distortion of an untreated disc after 100 playings.



Harmonic distortion of an identical disc, first playing after LIFESAVER treatment. Distortion is immediately reduced.



Harmonic distortion of a LIFESAVER-treated disc after 100 playings. Distortion remains lower than a new, untreated disc.

cable radio: a very viable alternative

About the author: Reed Smith was faculty adviser at WOUZ, Ohio University - Zanesville during the establishment and initial operation of this cable station. He is now Station Manager of KNAU-FM at Northern Arizona University in Flagstaff.

By Reed Smith

"We can't afford to increase power." "Our institution is cutting back funds." "We have no alternative but to go silent." "We could never get a radio station on the air." Sound familiar? Probably, but these need not be your school's excuses for being shut out of radio. With the new pressures from the FCC and commercial broadcasters, not to mention inflation and decreasing institutional support, cable radio should be considered as an alternative to licensed on-air broadcasting, or even silence. This article represents the experience of a group of students and a faculty adviser at a campus of Ohio University, who heard all these arguments, but put a station on the air anyway; a **cable** radio station.

Ohio University - Zanesville (OUZ) has a unique situation, which for years has stopped its radio/tv department

from putting a radio station on the air. The campus offers an Associate Degree in Broadcasting, which stresses production, yet offered the students no realistic avenue to air their productions anywhere but inside the studio. A local commercial station offered some obscure time for a packaged program to be aired, and a public address system was installed to pipe programming to lobbies on the commuter campus. Neither of these concepts proved very successful, however, because few people heard the programming, nor were the students involved impressed with the limited distribution of their efforts. It was just not the same as running a full-fledged station.

Over the years several possibilities for establishing a WOUZ radio station had been pursued, but with no success. Either our administration found the cost too high, local commercial stations threatened withdrawal of university support in response to possible competition, or the interuniversity bureaucracy was simply not willing to slice through the red tape. A carrier-current system was considered several times, but with no campus dormitories, the idea was scrapped.

As a result of these difficulties, and the substantial amount of resulting frustration, our department had basically given up the idea of any kind of radio station at OUZ. With the disheartening effect the absence of a station was having on the students in our radio/tv curriculum, however, we kept the dream alive in the back of our minds.

Then, in 1979, we started hearing more and more about the ease with which a **cable** radio station could be established and operated. We learned more by talking to Intercollegiate Broadcasting System representatives, and a couple of other schools who had such stations in operation. Could it really be this inexpensive, and simple to operate? We decided to investigate further, and since the local cable company had to cooperate to make the system work, we started discussions with their management.

This task was not as simple as it may sound because like many cable firms, the Zanesville company is group owned, and the manager is out of town much of the time. Local decisions cannot be made without his approval. After finally making contact

(Continued on Page 15)

across the spectrum:

(Continued from Page 4)

each sideband. This system also allows stereo reception by detuning two mono receivers above and below the carrier frequency. The natural advantage to this system, is that you do not have to buy a new receiver. However, the bandwidth of present receivers is so poor, that a new generation of AM receivers may well be needed if AM stereo is also to be high-fidelity. As noted in the last article in this series, AM radio is not limited to an audio bandwidth of 5 kHz, but is legally allowed and, in many cases, technically capable of an audio bandwidth the same as FM. Of course, the signal-to-noise ratio that is common in FM will always be much more difficult to attain in AM.

Moving on to the other systems, Magnavox and Belar are both systems that modulate the phase of the carrier. The disadvantage of these systems is that they make great demands on the antenna system of the transmitting antenna, but their advantage is a less expensive receiver. The Motorola system is a full quadrature system. In this arrangement there are two carriers, each on the exact same frequency, but phase shifted 90 degrees apart. This system is spectrally efficient. The last system, Harris, is a hybrid. It uses a quadrature approach, but the angle of the phase shift can vary. One of its advantages lies with the advent of asynchronous receivers, that we may see in the future. Such receivers may show very low distortion and greater immunity to skywave fading and its associated distortion. But enough of AM; the demand is in place and the FCC will eventually make a decision.

In the world of FM, the demand for quadraphonic sound is more difficult to document. Most of us recall the short-lived fad of quad records of the early seventies. The coming and going of quad left the slow regulatory process in the dust. The multitude of

different FM systems and the uncertainty of listener enjoyment leaves one to wonder if quad will ever make it. Records can only be done in the 4-2-4 system, and tape recording presently has the same problems. The 4-2-4 system is where the 3rd and 4th channel information is coded into the 1st and 2nd channels. In this way, the quad is compatible with stereo, but the quality is not good. FM stations have had the authority to broadcast 4-2-4 systems for many years, but virtually none do so now.

The FM systems before the Commission at present are 4-3-4 and 4-4-4 systems. The 4-4-4 system is called discrete because the four channels remain separate at all times. This is the highest quality system. The 4-3-4 system combines the two "quad" channels down into one channel. There is some loss of quality with this system, but it has greater compatibility with stations that are presently using their SCA (Subsidiary Communications Authorization). Nearly a dozen systems were presented to the Commission. Testing has continued for years and only a few proponents have shown great continued interest. One system that has done extensive testing and research is the QSI (which appears to be related to Panasonic). Their system and a compatible RCA system make up a 4-3-4 and 4-4-4 system that the Commission is presently considering for approval. Unlike AM stereo, the only questions about quadraphonic systems are whether they are compatible with reduced FM channel spacing and with the present use of SCA. The RCA-QSI systems seem to meet these standards and unless some major opposition comes soon, the FCC could approve FM Quad this year. If this is approved, EDFM stations would have the same right to go quad as commercial stations, but a few words of warning are in order.


The sales of anything quadraphonic

have fallen in recent years. Most record manufacturers have stopped making quad (4-2-4) records. The British, however, have been experimenting with a 4-2½-4 quadraphonic record, which may someday catch on. But, for the present you can not buy a broadcast console that is four channel and most school and college stations probably could not afford them even if they were available. Besides a lack of equipment, the sale of time-delay systems that simulate depth of sound are on the increase and appear to be satisfying what little demand there is for surround-sound effects. So, take your time before jumping on the quad bandwagon.

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IBS high school station services to grow

(Continued from Page 5)

I spoke at the Promotion seminar along with John Lopiccolo. Many ideas on methods of publicity as well as improving the image of high school radio were brought up for discussion and exchange.

Learning about each other was the purpose of the convention, and in this way, the convention was definitely a success. Although everyone's problems were not resolved, we all realized how many of these problems are common to most high school stations. Major problems include source and size of budgets, acquisition of record company service, motivation and training of staff, and dealings with school district administration.

Obviously, it will never be possible to resolve all of these problems in one weekend, once a year. The future of high school radio thus relies on collaboration and cooperation between stations all year 'round. One way of being informed of what others are doing is through the national newsletter published by John Lopiccolo. For information and subscriptions (at a mere \$3.00 per year

to cover costs), John can be reached at the College of Journalism, University of South Carolina, Columbia, S.C. 29208.

Most importantly, high school stations should meet with others in their area to compare methods of operation and exchange advice. This can easily lead to regional conferences and eventually a national high school association within IBS. I am beginning to plan a high school radio workshop for the New York-Long Island area, to be held sometime in the fall. This will be an opportunity for high school stations in our geographic region to discuss problems and hopefully arrive at some solutions, without the travel costs or magnitude of the IBS National convention. Stations in other areas of the country are urged to arrange similar workshops and conferences. Jeff Tellis of IBS has already expressed a willingness to support such ventures. Any high school station considering hosting a regional conference or interested in attending one should contact me for more information or call Jeff at the IBS offices. Meanwhile,

get in touch with nearby high school stations and invite their members to visit your studios and talk about ways to help each other. Of course, all station representatives are welcome at WKWZ; if someone from your station will be in the Long Island area just give me a call, and I will arrange a meeting.

We'd also like to know what other stations thought of the high school seminars. Stations are invited to send opinions on how the seminars were run, as well as suggestions for next year's IBS convention. Please send your feedback to me at:

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Right now, an immediate aim of high school stations should be to open the lines of communication among ourselves. High school stations are not as few and far between as is generally thought: IBS has identified about 120 stations, in addition to the many schools with closed-circuit, carrier-current or Cable FM stations. The potential of helping each other and high school radio as a whole is much too great to be wasted.

how to conduct a survey

(Continued from Page 8)

survey the first hundred people in a particular location or the residents of one dormitory because your results won't indicate the views of your entire population. Phone books and student directories are good to use because they usually list everyone.

You can either mail your questionnaire, ask the questions over the phone or pass the questionnaires out in person.

Compiling the Results

Now you must compile and summarize all the information in the completed questionnaires. Let's run through the compilation of a theoretical question. The question asked the respondents to rate X on a scale of one to five. First go through all the questionnaires and find out how many people circled a rating of 'one.' Now go through and find out the total of 'two' ratings and so on. Divide the total of 'one' ratings by the total

number of respondents to find the percentage of respondent who chose a rating of one. Compile all the questions this way.

The Survey Report

When you have completed compiling the data, it should be summarized in easy to understand language. The objective is to come up with a report that anyone at the station can understand. Use pie charts, graphs, and diagrams wherever possible to simplify the report. A copy of the questionnaire and the final report and findings should be kept on file. Copies should be made available to anyone who is affected by the survey (i.e.: The News Director, General Manager, Program Director, etc.). Post a copy on the bulletin board for the staff too.

Taking Action

The ninth and final step is the most important. It is reacting to the survey. All the time and effort put into a survey are meaningless if the results

aren't put to good use. For example, if your survey showed that people don't like your news, work to improve it. (Your survey should also help you determine what improvements are needed.)

There are a number of things you can research if you have the time or need the information. After you've surveyed your listening area, you can survey your college or university's faculty and administration, members of your student government association or local merchants. Also consider doing an in-depth survey of people who you know listen to your station to find out why they listen and what they like best. The possibilities for surveys are almost endless.

Survey Time

Now is the time to start on your survey. The longer you delay, the longer you'll wait for the results. A survey won't solve all of your problems, but in many cases it can point you in the right direction.

a holistic approach to radio news

(Continued from Page 6)

Most of them, however, aren't interested in a doctoral dissertation on foreign trade policy in the late 70's. Let them know how the world situation is affecting their lives. Plans to build a new Naval Hospital in San Diego is news, in San Diego. Very few people in Omaha would care, unless it's being built at the expense of a new Air Force Hospital there. Unless you're an all-news station, some international items take up time which should be more properly used for local items. Sure, the Middle East is big, but does it have the same impact locally that a fare increase on the local

bus line does? Whether or not you tell your audience about the Vietnamese invasion of Thailand, the vast majority will hear it from Dan Rather, John Chancellor, or Frank Reynolds.

Eliminating this duplication, or cutting it to a bare minimum should be our common goal. And there are benefits to this. Not only will your listeners be better informed on local issues, but as the station becomes more locally oriented, the listeners will feel that the station cares about them, their interests, their community. This feeling breeds a sense of loyalty which will manifest itself in ratings. And ratings, if you haven't

noticed, please programmers and management.

So let Les Nessman sit in his "office" polishing his "Silver Sow." We all have a legal mandate to operate "in the public interest," which five minutes of rip-and-read news per hour may satisfy legally. But, we also have a moral obligation to keep our listeners informed on what happens in the local area. That can only be filled by a lot of work. But after all, isn't that the point to being a Journalist, electronic or otherwise? We are the future of radio; it's up to us to start now to shape that future into an even better medium than it is now.

Editor's Note:

Although I can agree with much of what Mr. Basener has written here, I've got to admit some difficulty with his reasoning that listeners will get the international news from the TV networks, so why not leave this area to them and avoid needless duplication.

The world has become "smaller" with the advent of virtually instantaneous electronic communications technology and international events have become of greater importance to us all. That interest might be served by more in-depth coverage of those international events and issues that are most important, but which may be given superficial coverage by the networks. Compare an international story on the AP or UPI radio broadcast wire with the same story in the New York Times. It's like the difference between headlines and a half-hour newscast. Perhaps a better analogy would be the in-depth treatment given a story on ABC's Nightline compared with the surface coverage given the same story on the 7 o'clock network news.

Mr. Basener suggests that in-

ternational coverage should not encroach upon the time that should properly be given to local news coverage. But, why should one have to be done at the expense of the other? Why not expand the newscast to allow ample time for BOTH?

Many stations are still restricting themselves to five-minute newscasts. That's simply not enough time in which to do anything but a summary of expanded headlines, unless you format the five-minute as an in-depth feature covering a specific event, issue, or story. If you need more time for international AND local coverage and you've got the people to edit, write, produce, and air the material, why not expand the newscast to 10-minutes, 15-minutes, 30-minutes or more and run fewer newscasts? Another way of doing it is to stay with a standard starting time, but an open-ended close, fluctuating based on the importance, number, and length of the stories each day.

Longer newscasts don't have to be dull. Audio actualities and voicers from network sources can add variety to the pace and sound. Local coverage

should include interviews, actualities, voicers and sound as well, to make the coverage more listenable and more meaningful.

Local news coverage is perhaps the area in need of most strengthening at college radio stations. Often, many students come from out-of-town and show little interest in the events and issues that may affect the local campus community. We've got to work to overcome our shortcomings by actively recruiting those with an interest, both local commuters and out-of-town resident students. Start reading that local paper, calling on local officials, interviewing those active in local events. Get INVOLVED with your community and make it evident in your local coverage.

By doing international, national, and local news with a different perspective, more depth and content, you'll be avoiding the duplication mentioned earlier. You will be providing a public service, tailored to your audience in terms of content and presentation, as an alternative to the traditional coverage available elsewhere.

JT

targeting your format to your audience

(Continued from Page 7)

from three other medium markets. More than twenty signals penetrate our listening area, with almost every kind of format.

We could search to find a unique format, something not being done by any area station. For example, our area does not have a classical station with a clear signal. But this is impractical because none of the current air staff has expressed any significant interest in this type of program.

We could "block program," or run specialized shows at different times as so many educational stations do. However, we decided that because the station reaches more than three-quarters of a million people, this would fractionalize the audience too much. Block programming is very difficult to do well, and in such a way that the audience knows when to listen for a particular show. So the only specialty show we run, outside of some public affairs, is a jazz show on Sunday evening.

For several years, we had run a mainstream album-rock format, which ranged in its sound and structure only as much as the musical tastes of four program directors. Finally, last year we sat down and evaluated what we

were doing, and who we were serving.

Four miles away stood a 50kw Superstars AOR, doing virtually the same thing we were. This near-duplication of format could be distinguished only by our lack of commercials, and our announcers' lack of polish.

The question became: how to reach the largest audience while providing some kind of alternative, and how to do it **well**.

Our audience had always been sizeable and appreciative, as well as quick to provide feedback. For many months, callers and street-talk had suggested that the area needed an adult approach to rock music, with enough diversity to include some jazz, blues and folk-rock. In other words, nothing existed to satisfy the person in his or her late-twenties/early-thirties who does not like what I call "kiddie-rock" (Nugent, Van Halen, Aerosmith, etc.), beautiful music, or album hits.

Taking a cue from Raleigh's WQDR (featured in a **Radio & Records** article), we decided to program a form of "Album-Oriented Adult Contemporary" music; rock with the heavy-metal removed. It wasn't mainstream, commercial rock, mellow rock, hit-radio, or free-form. It gave

our staff the opportunity to program their shows by themselves (with some structure in new music) as well as experience in relating to an audience lifestyle somewhat different than their own.

Almost a year later, our format has caught on. Some commercial stations have begun to talk about taking the type of direction we have. Advertisers' demographic targets have shifted from 18-34 to 25-54.

So soon, we'll probably be looking for another new direction. That quest, and the willingness, even eagerness to experiment is what separates college radio from its commercial counterpart.

The correct evaluation of who is out there, and who will be listening is what will make a station successful. If you are happy with the way your station sounds, and you think your listeners are too, terrific! But if you are not sure about what you're playing, and to whom you're playing it, perhaps the station's policymakers should sit down and reevaluate the station goals.

If creativity is lacking from within, don't hesitate to call other stations, both college and commercial. They are usually happy to provide advice. So much, in fact, that the debate will most likely continue to rage on.

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cable radio: a very viable alternative

(Continued from Page 10)

with the manager, and getting over our initial euphoria that the only charge to us would be the phone line getting our programming to the company, we encountered a snag. The cable firm insisted that a legal contract be drawn up by their Washington, D.C. communications law firm. The management informed us this would take a great deal of time, and we would have to bear the several hundred dollar fee. We did not have the funds to pay such a cost, but fortunately, after telephone conversations with the attorneys, we discovered the contract was standard, and although it did take several months to prepare after we pleaded extreme poverty, the law firm decided not to charge us. We are now happy to have the legal agreement since it not only protects the cable firm, but WOUZ as well.

After overcoming the legal barrier, we made progress quickly. Further negotiations convinced the cable company to locate our signal at 107 MHz on the radio dial, as well as having our audio signal carried over their video weather channel. By Summer, the students in the radio/tv program had raised nearly \$1,000 through candy sales, disco dances and a flea market. This bought the modulation equipment, and leased a telephone line the two and one-half miles between our studios and the cable headend.

When Fall Quarter 1979 arrived, WOUZ signed on the air twelve hours a day, seven days a week with music, news, play-by-play sports and commercials. The students became so excited about operating their own station that everyone really pitched in, working overtime, doing everything necessary to operate a dependable station. They did everything from selling advertising to typing logs, from producing spots to sharpening on air performances. After signing-on, the biggest initial battle was informing the potential audience of over 30,000 that we existed, and how to receive our signal. A publicity campaign of JOURNAL OF COLLEGE RADIO, VOL. 18, NO. 5

news releases, bumper stickers and posters solved that problem quickly.

Local advertisers supported us beyond belief in our first year of operation by signing spot contracts totaling over \$5,000.00. Our first year's revenue was not great, compared to a professional station's income, but it allowed us to pay the bills, and even buy some new equipment. Of course, all was not perfect; we had some minor problems. Like the Saturday night the phone company disconnected our line by mistake, or the Sunday afternoon a distribution amplifier blew. Overall, however, compared to our achievements, the problems were minimal.

Listener response was particularly gratifying, as young adults enjoyed our Album Oriented Rock format, in a town where only Beautiful Music or Middle-of-the-Road is available. The number of phone music requests increased consistently throughout our first year on the air. Technically, with a direct-wired signal from studio to home, we have the best sound on the FM radio dial. Also surprisingly, and to the delight of our administration, not a single negative word was heard from the local commercial station managers.

Overall, the WOUZ station boosted the morale of our radio students tremendously, and serves as an excellent recruiting tool for new students. In the second year of operation, sales are up, student involvement is higher, on-air hours have been expanded and listenership has increased dramatically. WOUZ is operated just like a professional, commercial radio station, and students in our degree program are better prepared to enter the "real world" of broadcasting as a result.

I think the future of cable radio is extremely bright. Some see it as a second best alternative, somehow less than a real broadcast situation, but I disagree. It can be as realistic a radio station situation as you are willing to make it. With cable penetration increasing yearly, spectrum space more scarce,

audiophiles desiring increased radio signal quality, and the communications industry moving closer to McLuhan's futuristic predictions, radio via cable will have a major impact on the broadcast marketplace. Beyond these facts, cable radio is "hassle free radio." Since the FCC has taken a hands-off stance, you are not faced with licensing, public files, operating-hour mandates, renewal forms, and a host of other legal and technical regulations.

So before you give-up on getting a station on the air at your school, or are forced to go silent, consider **cable** radio. Every market is different, and your problems with putting this kind of station on the air may be slightly greater, or even smaller. The initial investment and operating costs are minimal, and the payoff could be astounding, as it was for WOUZ.

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FCC modifies fundraising policies

The FCC has amended its rules to grant noncommercial broadcasters greater discretion in the areas of programming and fundraising.

Although the Commission will continue to prohibit public broadcasters from airing programs and announcements for pay, the new basic rule adopted will allow them to air unpaid promotions of goods and

services when in their judgment such promotions would serve the public interest.

Specifically, the new rule prohibits the broadcast of program matter by noncommercial educational stations for which the licensee, its principals or employees receive any consideration, with the exception of acknowledgment of contributions.

In related matters, the Commission

declined to adopt new restrictions on the fundraising activities of stations, and liberalized the rules under which stations can identify and acknowledge contributors.

Concerning contributions, the Commission eliminated the "name only" restriction on acknowledgments, stating that use of other information about the donor such as location and identification of product lines would present no inherent difficulty. It did emphasize, however, that the promotion of products, as opposed to identification, was prohibited. It said it expected licensees to utilize this greater latitude and flexibility to develop new policies for such acknowledgments which, while consistent with the noncommercial status, could stimulate new and broader sources of financial support for programming and general operation.

These matters were addressed by the FCC some three years ago with their First Report and Notice on Docket No. 21136 in June, 1978. That Notice sought comments on 22 specific questions regarding the noncommercial status of non-commercial educational stations. At that time, the FCC proposed placing limits on some types of fundraising activities, looking towards striking a balance between the financial needs of such stations and their obligation to provide an essentially non-commercial broadcast service.

The full text of the Commission's decision has not been published as of this writing, but was expected around the beginning of May. The new rules will go into effect 30 days after publication in the Federal Register which would likely mean an effective date sometime in June.

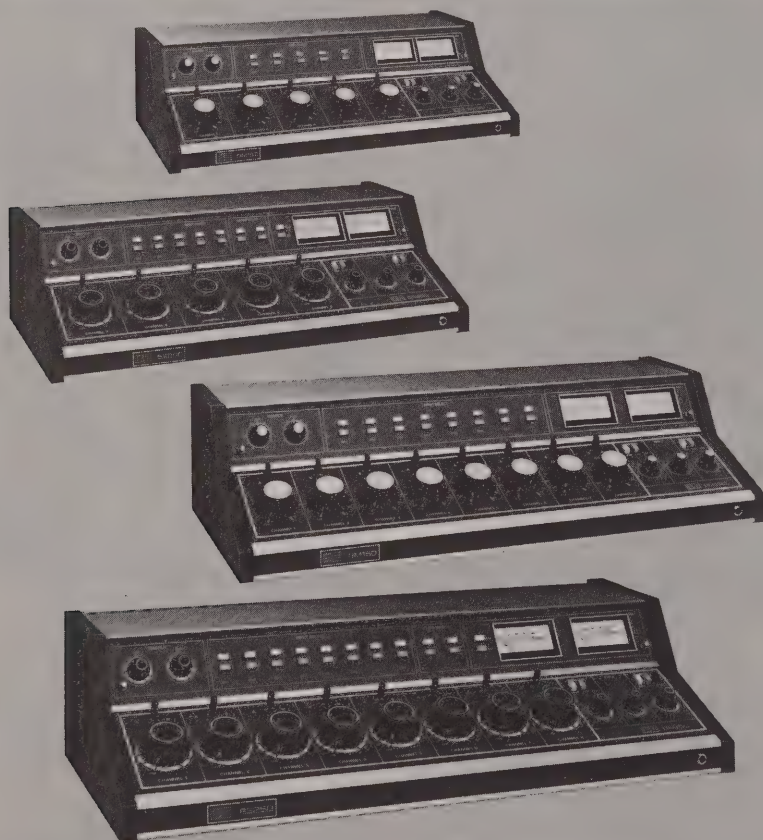
IBS member-stations will receive "plain-English" summaries of the new rules and their practical applications once this text is made available and analyzed. Stations with questions are welcome to call or write the IBS offices at (914) 565-6710 or P.O. Box 592, Vails Gate, New York 12584. The FCC contact for this docket is John Kamp, who can be contacted by phone at (202) 632-6302 in Washington.

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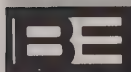
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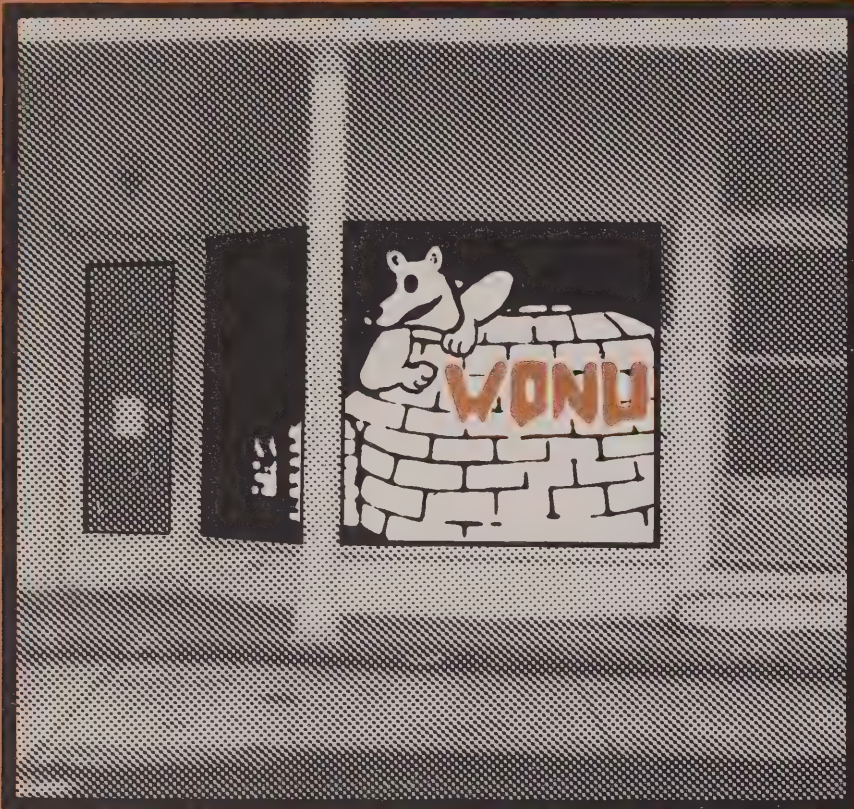
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